



Republic of the Philippines  
Department of Environment and Natural Resources  
**FOREST MANAGEMENT BUREAU**

Visayas, Avenue, Diliman, 1100 Quezon City  
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E-mail Address: fmb@denr.gov.ph

Website: [www.forestry.denr.gov.ph](http://www.forestry.denr.gov.ph)



**MEMORANDUM**

FOR : The OIC, CENRO  
Calamianes Islands  
Brgy. 5, Coron, Palawan

FROM : The Assistant Secretary for Policy, Planning, and Foreign-Assisted  
and Special Projects, and Director, in concurrent capacity

SUBJECT : **SUBMISSION OF 2021 ANNUAL ACCOMPLISHMENT  
REPORT OF NATIONAL BEEF CATTLE RESEARCH AND  
DEVELOPMENT CENTER (NBCRDC), PALAWAN**

DATE : **FEB 14 2022**

This is to acknowledge the receipt of your Memorandum dated 14 January 2022 regarding the Letter dated 31 December 2021 of Mr. Larry L. Lariosa of the National Beef Cattle Research and Development Center (NBCRDC), Palawan on the submission of their 2021 Annual Accomplishment Report as stipulated in the Memorandum of Agreement (MOA) between the Department of Environment and Natural Resources (DENR) and the Department of Agriculture (DA).

In this regard, kindly continue to furnish us copies of accomplishment reports, or any strategic and operational plan for the Busuanga Pasture Reserve (BPR) from the NBCRDC-Palawan.

FOR INFORMATION AND APPROPRIATE ACTION, PLEASE.

  
**MARCIAL C. AMARO, JR., CESO II**

cc: Regional Executive Director, DENR MIMAROPA Region

Document N 2147554334 / 0 -19089

Sender Mark Glenn T. Managdag

Address Coron, Palawan

SUBJECT Memo dtd Jan 14, 2022 Ltr dtd Dec. 31, 2021 of Larry L. Lariosa Agricultural Center Chief VI, National Beef Cattle Research and Development Center (NBCRDC) re: Submission of 2021 Annual Accomplishment Report of NBCRDC Palawan as stipulated in the MOA by and between the DENR and DA



Addressee (s) Office of the Director

cc Addressee FMB D

ROUTING SLIP

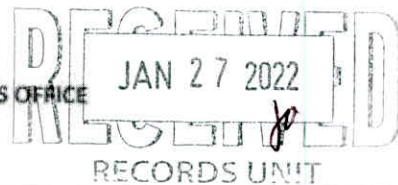
FROM	DATE/TIME RECEIVE	FOR/TO	TIME RELEASE	ACCEPTANCE REMARKS/ACTION REMARKS
Records	01/27/2022 9:00 am	OD FMD % For Lito	01/31/22	for info, receipt & reference, & further action pls. Thanks. [Signature]
FOREST MANAGEMENT BUREAU RECEIVED JAN 28 2022 [Signature] OFFICE OF THE DIRECTOR		BPR/ FRDS	02/02/2022	for information, record, reference and appropriate action please. Thank you. [Signature]





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Department of Environment and Natural Resources  
COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE  
Calamianes Island, Coron, Palawan  
Email address: cenro\_coron@yahoo.com

FOREST MANAGEMENT BUREAU



## MEMORANDUM

FOR : The Assistant Secretary for Policy, Planning and Foreign Assisted and Special Projects, and FMB Director

THRU : The Chief, Forest Investment Development Division

FROM : The OIC, CENR Officer  
Calamianes Islands  
Brgy. 5, Coron, Palawan

SUBJECT : **LETTER DATED DECEMBER 31, 2021 OF MR. LARRY L. LARIOS, AGRICULTURAL CENTER CHIEF VI, NATIONAL BEEF CATTLE RESEARCH AND DEVELOPMENT CENTER (NBCRDC), CORON, PALAWAN RE: SUBMISSION OF 2021 ANNUAL ACCOMPLISHMENT REPORT OF NBCRDC-PALAWAN AS STIPULATED IN THE MOA BY AND BETWEEN THE DENR AND DA**

DOCUMENT ATTACHED : Letter dated December 31, 2021 of Mr. Larry L. Lariosa, Agricultural Center Chief VI, NBCRDC Coron, Palawan with enclosures

DATE : 14 JAN 2022

Respectfully forwarded is the subject letter dated December 31, 2021 of Mr. Larry L. Lariosa, Agricultural Center Chief VI, NBCRDC, Coron, Palawan together with its enclosures pertaining to the 2021 Annual Accomplishment Report of NBCRDC-Palawan received by the BPR Management Office on January 6, 2022. The submission of said Annual Accomplishment Report is based on the obligation of BAI-NBCRDC as stipulated in the MOA by and between the DENR and DA to furnish the DENR-FMB copy of the strategic and operational plans and annual accomplishment report for monitoring purposes.

For the Assistant Secretary for Policy, Planning and Foreign-Assisted and Special Projects and FMB Director's information, record, and further instruction/s, if any.



For and in the absence of the CENRO

**MARK GLENN T. MANAGDAG**  
EMS II/ In-charge, Office of the CENRO

Brgy. 5, Coron, Palawan

2147554334



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Department of Environment and Natural Resources  
**COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE**  
Calamianes Island, Coron, Palawan  
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14 JAN 2022

**LARRY L. LARIOS, BSA, MPA**  
Agricultural Center Chief VI,  
NBCRDC, Coron, Palawan


Dear Mr. Larios,

This is acknowledged receipt of your letter dated December 31, 2021, received by the BPR Management Office on January 6, 2021. On the letter, you're forwarding the 2021 Annual Accomplishment Report of National Beef Cattle Research Development Center (NBCRDC) – Palawan.

Please be informed that the said communication letter with attachment will be forwarded to the Forest Management Bureau for their information.

Thank you and warm regards.

For and in the absence of the CENRO

  
**MARK GLENS T. MANAGDAG**  
EMS II/ In-charge, Office of the CENRO





Republic of the Philippines  
Department of Agriculture  
Bureau of Animal Industry  
NATIONAL BEEF CATTLE RESEARCH AND DEVELOPMENT CENTER PALAWAN  
Brgy. Decalachao, Coron, Palawan  
Email address: nbcrcd.main@bai.gov.ph

December 31, 2021


**PEREGRINO S. BAGUNU JR.**  
OIC-Forest Management Bureau  
Coron, Palawan

Dear Mr. Bagunu,

Greetings from the Bureau of Animal Industry – National Beef Cattle Research and Development Center (NBCRDC), Coron, Palawan!

Respectfully forwarding the 2021 Annual Accomplishment Report of NBCRDC-Palawan for your perusal.

Very truly yours,

  
**LARRY L. LARIOSA, BSA, MPA**  
Agricultural Center Chief IV  
National Beef Cattle Research and Development Center  
Coron, Palawan

Forest Management Bureau  
BPR MANAGEMENT OFFICE  
**RECEIVED**

Date: Jan. 4, 2022  
By: Pjt pp. 22/138/2  
Ref. Code: 118049

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## National Beef Cattle Research and Development Center – Palawan

### 2021 ANNUAL ACCOMPLISHMENT REPORT

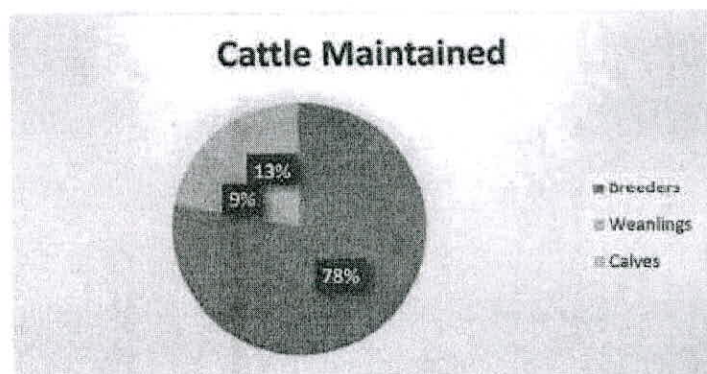
The National Beef Cattle Research and Development Center – Palawan (**NBCRDC-Palawan**) is one of the three (3) R and D Centers of the BAI for beef cattle and tasked to transfer and demonstrate technologies on pasture management, provide trainings and planting materials, and ensure farmers and livestock raisers with quality breeding stocks and adaptable technologies towards sustainable and self-sufficient cattle production through extensive grazing.

The main function of the Center is the conduct of Research and Development and Extension activities that include maintenance of breeders and pasture areas, and distribution of animals, forage planting materials and cattle manure.

#### I. PRODUCTION AND MAINTENANCE OF ANIMALS AND PASTURE AREAS

##### 1.) Maintenance of Breeders

For the year 2021, the Center has a total population of 679 heads cattle composed of 505 breeders, 56 weanlings and 88 calves. Breeders are the sources of calves (young cattle) that are raised to be used as replacement stocks to improve production in the Center and the rest are distributed to backyard livestock raisers (comprising about 90% of the total inventory of the Philippines). These are distributed thru the Genetic Improvement Program of the Department of Agriculture- Bureau of Animal Industry (DA-BAI). The Program is aimed to improve the genetic make-up of the animals raised by the farmers thus increasing productivity and consequently increase their income.



To improve the reproductive performance and genetic quality of the breeders at NBCRDC-Palawan, 74 cows and heifers were subjected to artificial insemination (AI). It is done by conducting regular rectal palpation before and after artificial insemination.

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In order to maintain the health of animals, vaccination, deworming, and dipping are regularly conducted. Tuberculosis antigen test was done to bulls and cows during the period.

Birth weight were recorded and ear tattooing was done on all the calves produced for identification purposes.

## 2.) Maintenance of horses

A total of 48 horses are also maintained in the Center which are being trained and used by cowboys and guards in herding the cattle.

## 3.) Maintenance of Pasture Areas

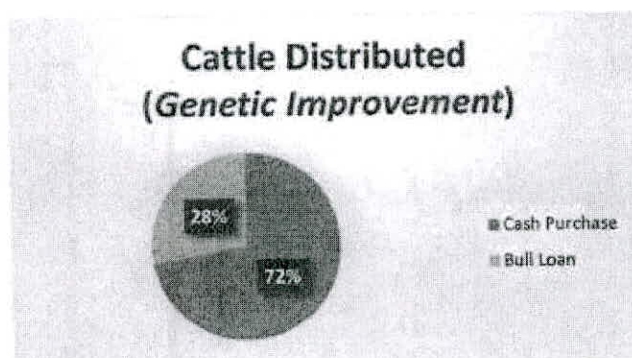
Pasture areas which are dominantly Humidicola (*Brachiaria humidicola*) are being used for grazing. About two (2) hectares were planted to Pakchong or the Hybrid Napier (cross of ordinary Napier – *Pennisetum purpureum* and pearl millet – *Pennisetum glaucum*) which are used for cut and carry feeding of some cattle (mostly in isolation areas) and for planting materials (stem cuttings) that are distributed to livestock farmers to improve their production.

## II. DISTRIBUTION OF GOODS AND SERVICES

### a.) Animal Distribution/Disposal

For the period, the Center has disposed sixty (60) head cattle for the following purposes:

For genetic improvement or breeding purpose, twenty-five (25) heads were distributed, 18 of which are paid in cash while 7 is thru the Bull Loan Program of the BAI. This benefitted 16 livestock raisers/farmers in Coron and Busuanga helping them improve their stocks.



During this Covid-19 pandemic, the Center contributed (through donation) 7 heads cattle to frontliners of different local and national agencies in the municipality of Coron. Likewise, 6 heads were sold upon request that were used by families for meat consumption. In addition, 22 heads were disposed on emergency sale due to accidents incurred by the stock. The disposed 35 heads culled cattle contributed an estimated 5.2 tons to the meat supply of the municipality of Coron thereby in a way reducing the ill effect of ASF (African Swine Fever).

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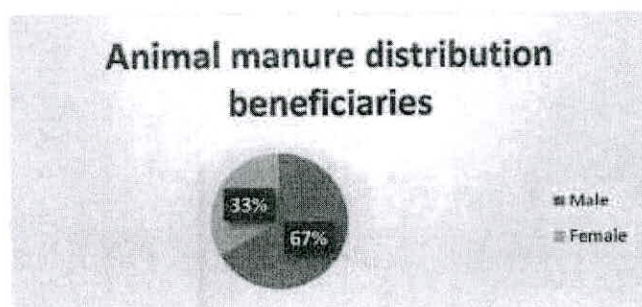


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#### b.) Distribution of Cattle Manure

Animal manure is ideal to be used as organic fertilizer since it not only increases the fertility of the soil but also improves its texture. In the Center, manure is being collected and distributed to interested parties. For the year, a total of 344 sacks (approximately 16 tons) have been distributed to 48 clients composed of 32 male and 16 female. It is equivalent to 22, 27 and 16 bags complete (14-14-14), urea and Solophos, respectively thus, saving cost of fertilizer inputs of the farmer recipients. The manure according to the recipients will be used to fertilize vegetables and seedlings of fruit-bearing trees.



#### c.) Distribution of forage planting materials

To promote cattle raising and ensure proper nutrition of animals, the Center also distributed planting materials. In the year 2021 a total of 32,750 Napier grass stem cuttings were distributed to the municipalities of Coron (Brgy. Decalachao, San Jose and Borac) and Busuanga (Quezon, New Busuanga and Old Busuanga). These can be planted to about 1.6 hectares land area in which if rainfed and unfertilized can support a minimum of 4 a.u. (animal units) per year. With a sustainable feed supply, animal production is likely to increase.

Technical advice is provided to the clients of these goods (animals, planting materials and manure) and also to some who approach staff thru the office for advice.

### III. CONDUCT OF RESEARCH AND DEVELOPMENT PROJECTS

In search for alternative feeds to ruminants specifically for beef cattle using indigenous forage crop, an on-going research project on *Caralla brachiata* is being conducted in collaboration with the BAI-Livestock Research and Development Division. The project aims to determine its herbage yield, dry matter digestibility using in-situ technique and to study the effects of its feeding on the production performance and meat quality of Brahman beef cattle.

Of the 12-ha newly established area planted with different forage species will serve as demonstration and experimental areas. In this area, two (2) hectares were planted to Cook Stylo (*Stylosanthes guianensis*) and one (1) hectare with Sorghum (SPV 422) are intended for research – 1 ha Stylo will serve as source of base feed for the on-going project on Caralla

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while the other area will be used for researches on its seed production and feed processing. The Sorghum will be for preservation specifically silage making.

As a Research and Development Center, generation of new technologies through researches is of high importance. A total of five (5) research proposals had been submitted by the Center's technical personnel as follows:

Title of Research	Proponents	Duration	Total Project Cost
Production of Palawan Brahman Standard Breed through Selection and Breeding	Alfonso G. Magno Jr., DVM	2022 - 2027	7,212,540.00
Effects of Fatty Acids Supplementation on the Performance of Beef Cattle at the National Beef Cattle R and D Center-Palawan	Alfonso G. Magno Jr., DVM	2022-2023	
Comparative Analysis on the Feed Conversion of Napier Grass and Concentrate on the Culled Cattle with Different Ages	Eduard P. Palay, MENRM Alfonso G. Magno Jr., DVM	2022-2023	587,322.00
Impact Evaluation of the Bull Loan Program of NBCRDC Palawan	Eduard P. Palay, MENRM	2022	100,000.00
Seed Production and Forage Processing and Preservation of Stylo ( <i>Stylosanthes gulanensis</i> ) CIAT 184 for Beef Cattle Production	Emily E. Victorio, MSc	2021-2023	100,000.00

The BAI is coming-up with a Master Development Plan for 2023-2028 of its different Research and Development Centers and NBCRDC Palawan has drafted its plan. For the years to come in addition to the present function, the Center is mandated serve as a nucleus farm which would entail major development activities.

#### IV. EXTENSION SUPPORT, EDUCATION AND TRAINING SERVICES (ESETS)

Transfer of technologies is done thru education and extension activities which is also a function of the Center. These are offered to or requested by the clients. For the period, the Center catered both students and livestock farmers.

##### 1.) Conduct of virtual student internship

Notwithstanding the Covid-19 pandemic, NBCRDC Palawan was able to conduct student internship in a different platform which is online (virtual). A student from the Pamantasan ng Lungsod ng Maynila (PLM) successfully completed her 120-hour requirement for the degree of BS Biology major in Ecology. Although there were applicants from other

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universities, only one was qualified (course and field of specialization of the student and the functions of the R&D Center must match).

## 2.) Conduct of seminar

In preparation for the implementation of the Backyard feedlot Cattle Fattening project and to prepare the would-be recipients, seminars were conducted at Brgy. San Jose, Coron, Palawan on October 4, 2021 attended by forty-one (41) males and three (3) females members of the Samahan ng Katutubong Tagbanua ng San Jose; at Covered Court, Brgy. Decalachao, Coron, Palawan on December 2, 2021 participated sixteen (16) males and eighteen (18) females members of the Pamayanang Katutubong Tagbanua ng Decalachao (PTKD); at the NBCRDC-Palawan on December 14, 2021 participated eighteen (18) males and six (6) females from Malkapuyaw Farmers Association of Brgy. Decabobo, Coron, Palawan. The seminar included lectures on forage and pasture establishment and management, and beef cattle production and health management.

Prepared by:

  
**EDUARD P. PALAY, MENRM**  
Agriculturist II

Reviewed by:

  
**EMILY E. VICTORIO, MSc**  
Supervising Agriculturist

Approved by:

  
**LARRY L. LARIOSA, BSA, MPA**  
Agricultural Center Chief IV



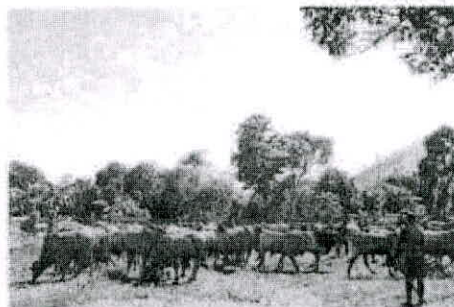
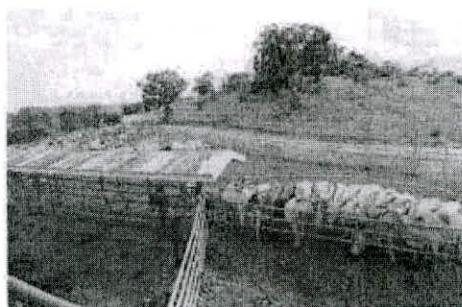




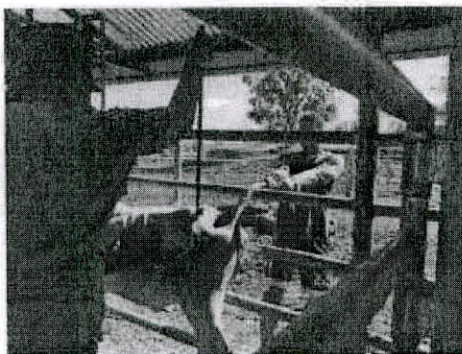
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#### DOCUMENTATIONS



*Fig1. Animals maintained*



*Fig2. Branding of newly-weaned calves*



*Fig3. Land preparation of the area for pasture development*

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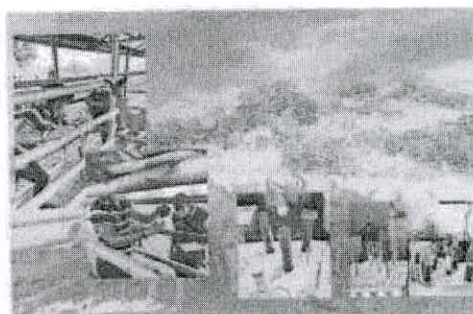
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*Fig4. Distribution of animal manure*



*Fig5. Assistance to data collection of C. brachiata (Research)*



*Fig6. Conduct of fecal analysis*

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Fig7. Conduct of antigen test

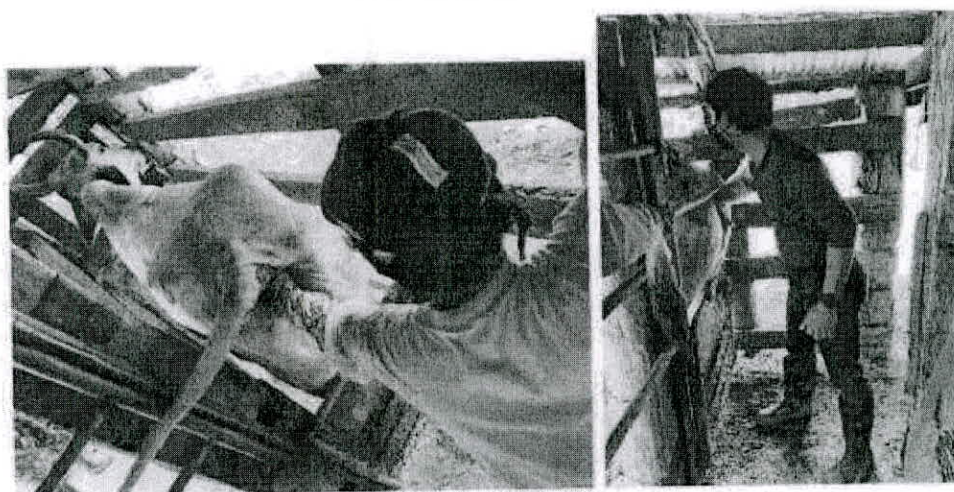


Fig8. Rectal palpation

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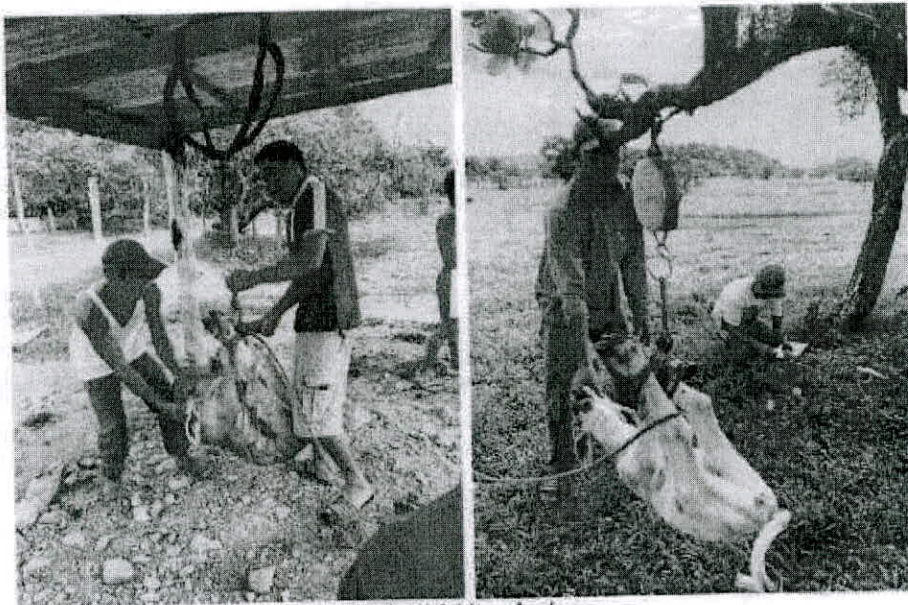


Fig9. Weighing of calves



Fig10. Ear tattooing

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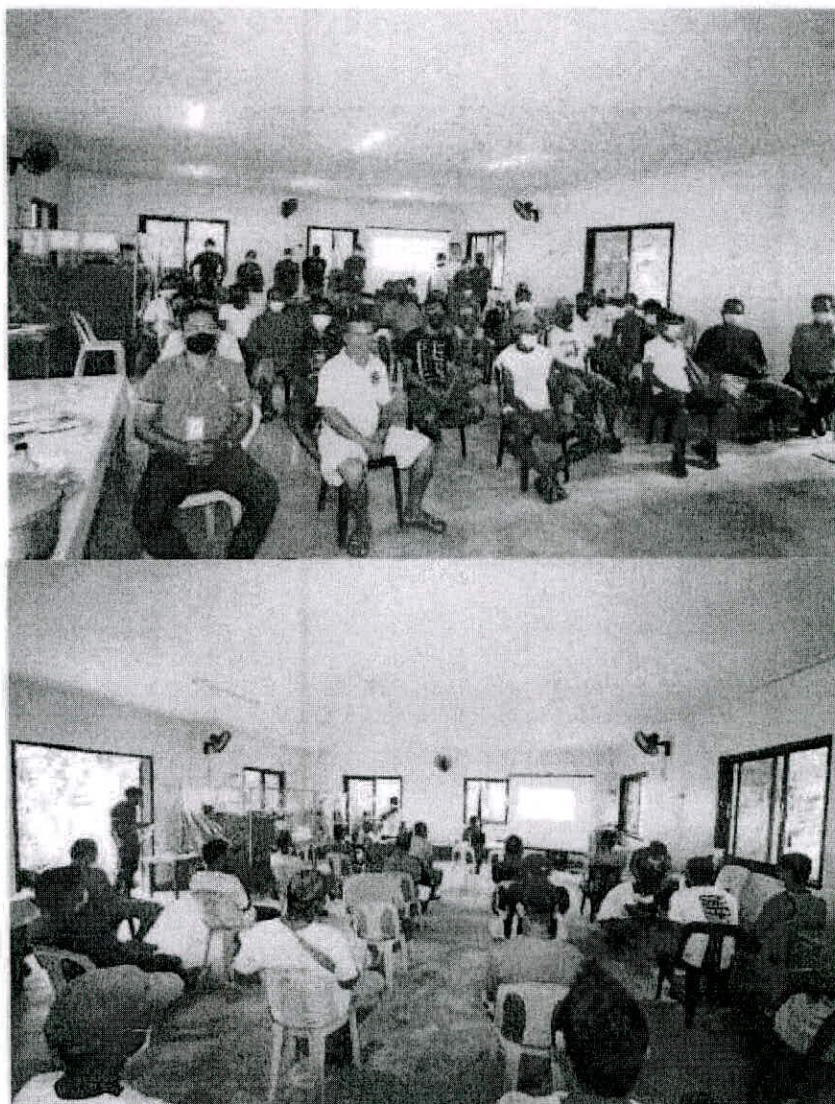






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*Fig11. Seminar on Backyard Feedlot Cattle Fattening at Brgy. San Jose, Coron, Palawan*

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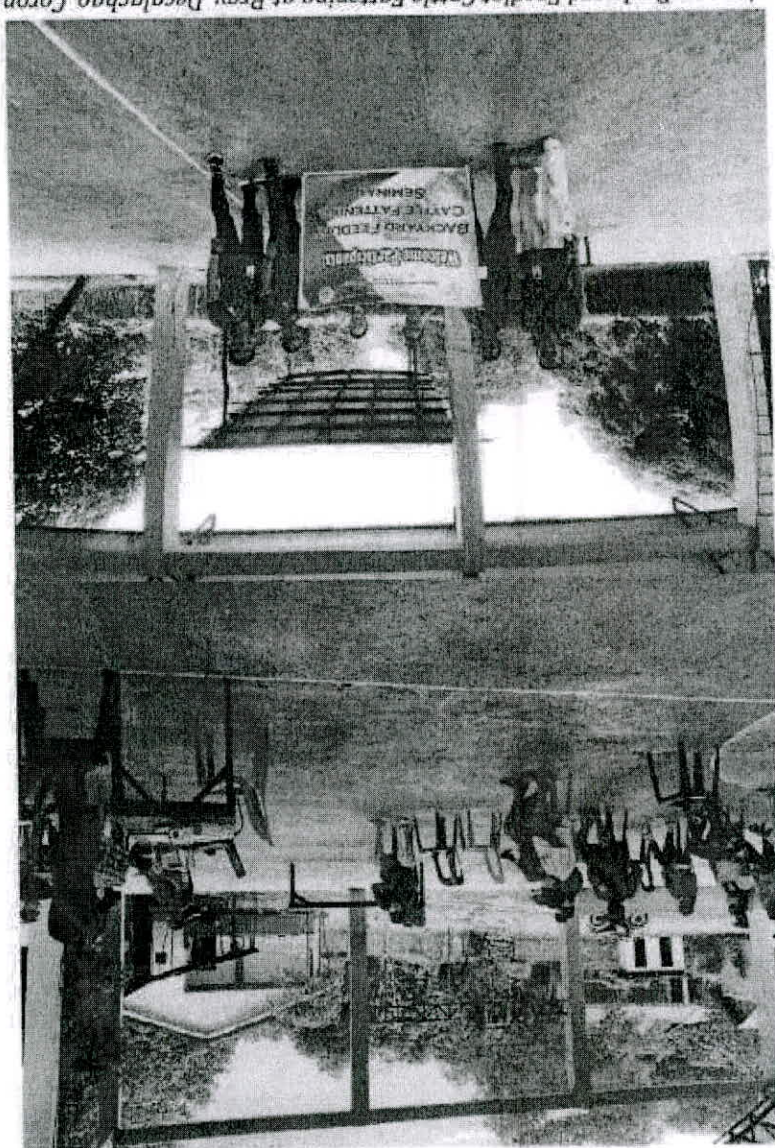






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Fig12. Seminar on Backyard Feedlot Cattle Fattening at Brgy. Decalachao, Coron, Palawan



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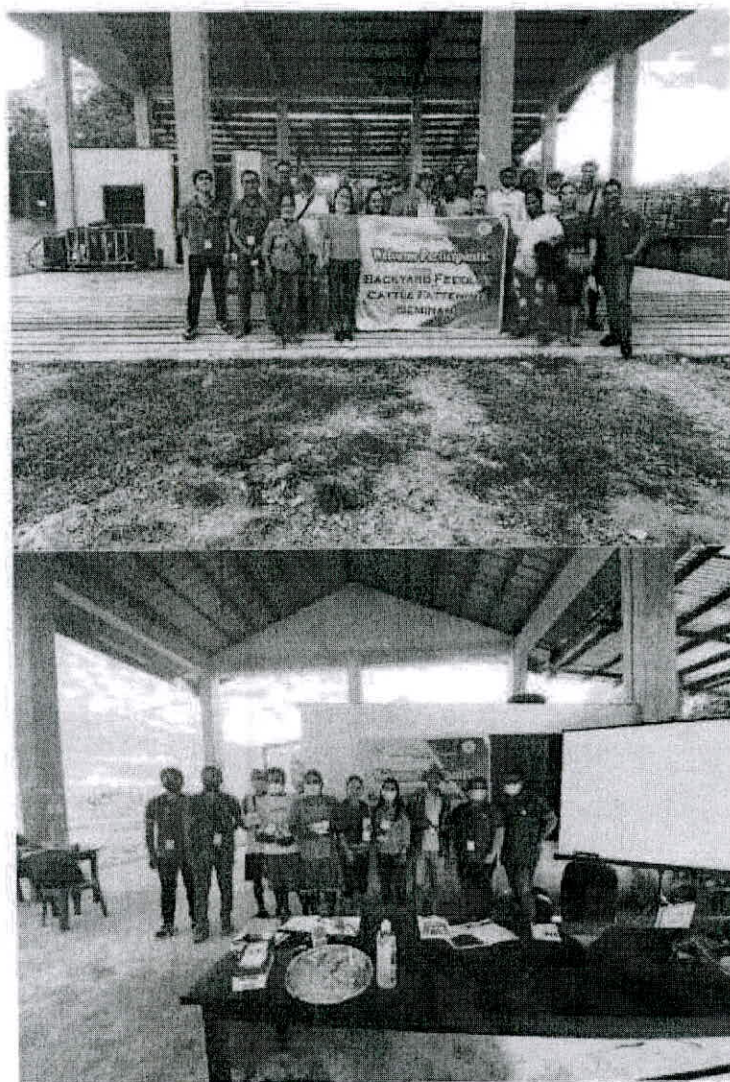


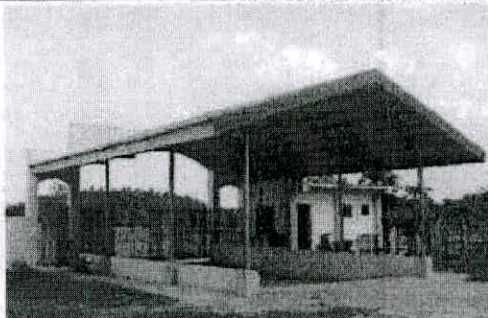
Fig13. Fig12. Seminar on Backyard Feedlot Cattle Fattening at NBCRDC-Palawan, Brgy. Decalachao, Coron, Palawan

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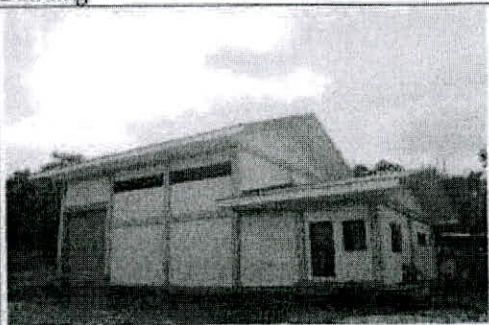
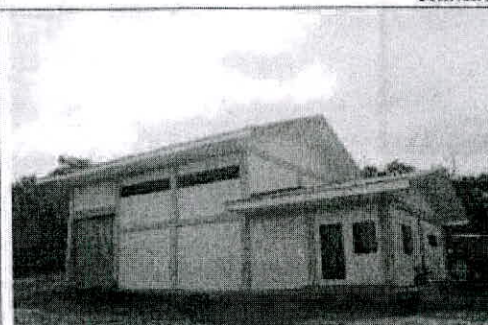
BAI-NBCRDC ASSETS AND UTILIZED PASTURE



*Guard house*

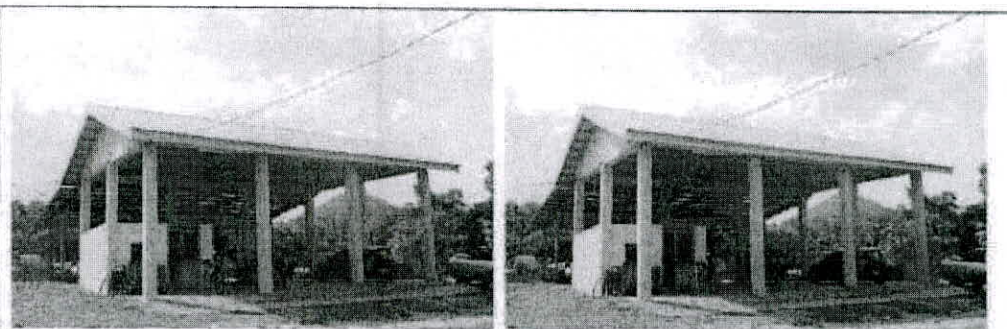


*Admin Building*



*Warehouse*





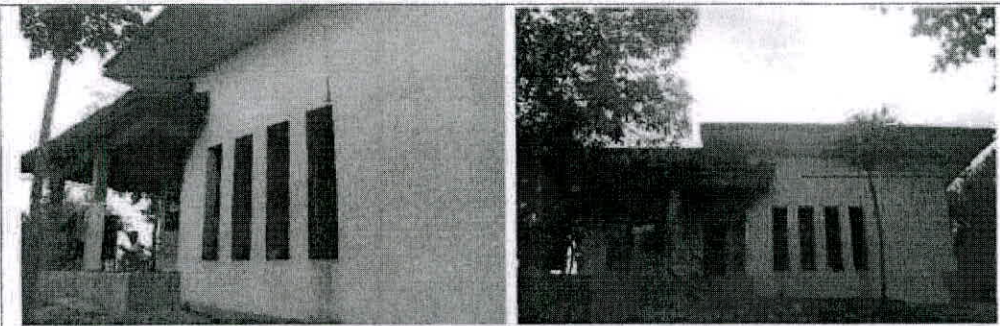
*Motorpool*



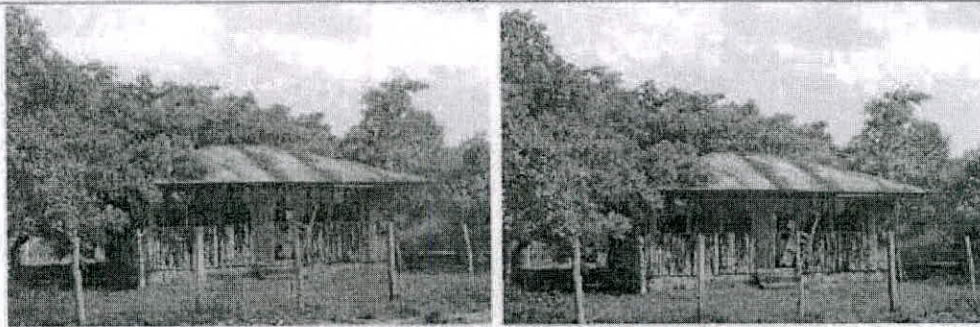
*Staff houses*



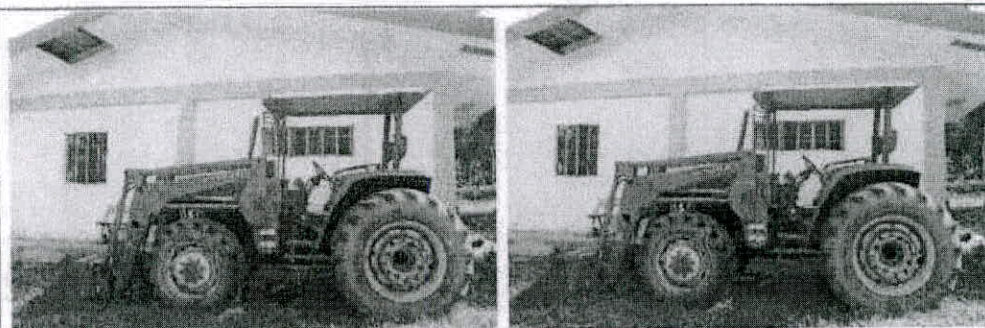
*Cattle yard*



Manager's House



Generator house



John Deere Tractor





Kubota Tractor



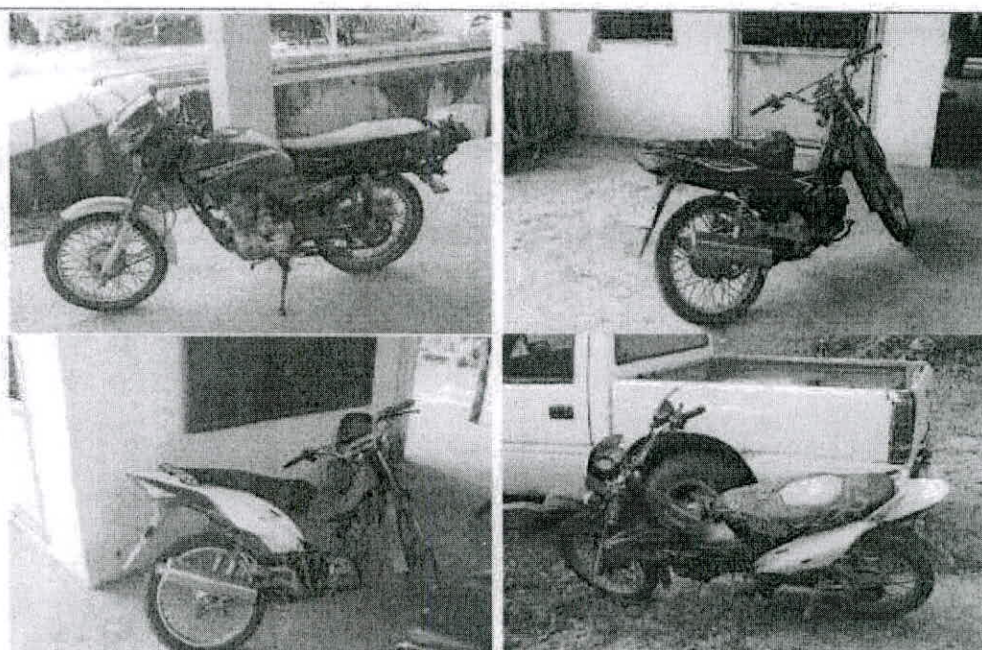
Isuzu pick-up



Wrangler Jeep

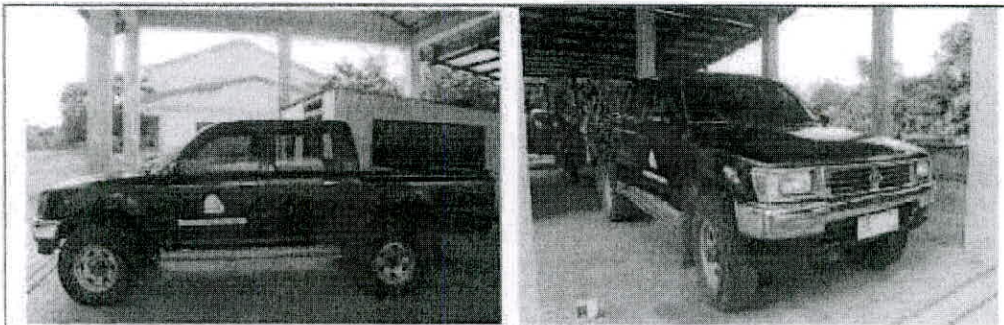


Isuzu Truck



Motorcycles

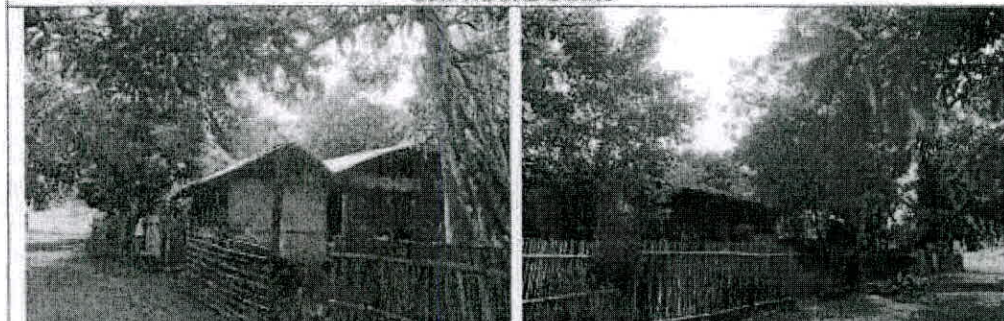




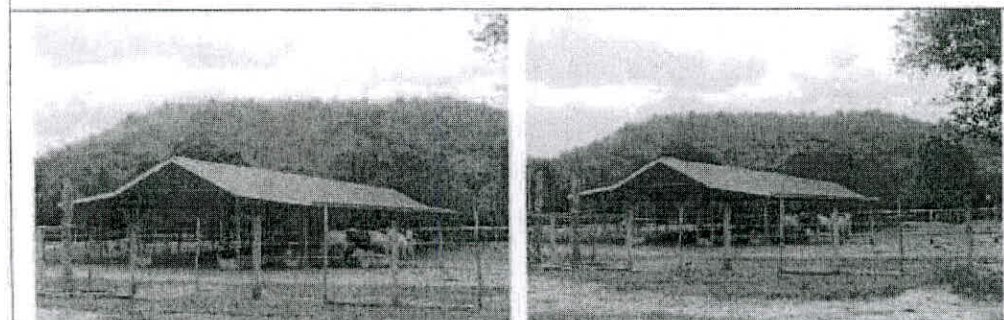
Toyota Pick-Up



BAI-NBCRDC Gate

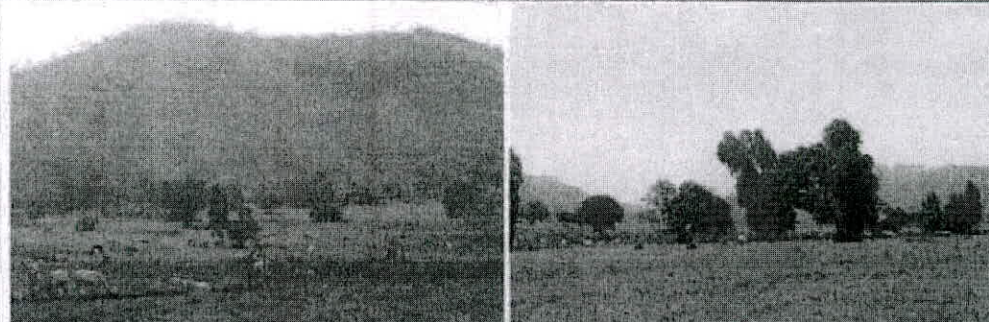


BAI-NBCRDC Palawan's Employees Village

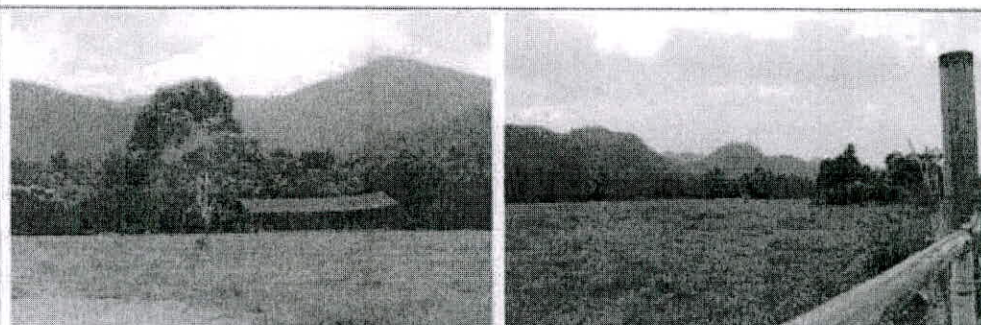




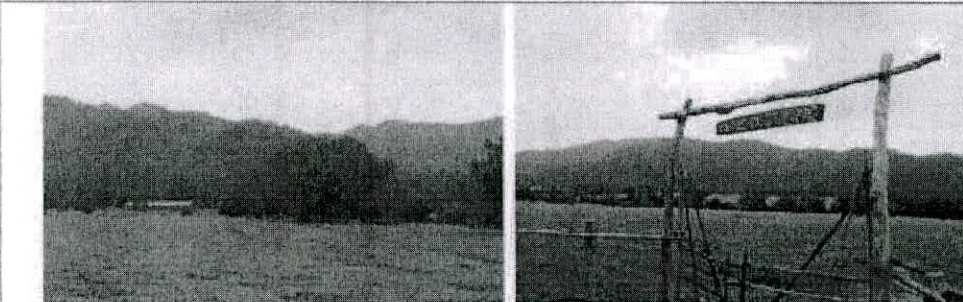
Tebatan Feedlot



Pinagbalatan Paddock



Short Paddock



Tebatan Paddock





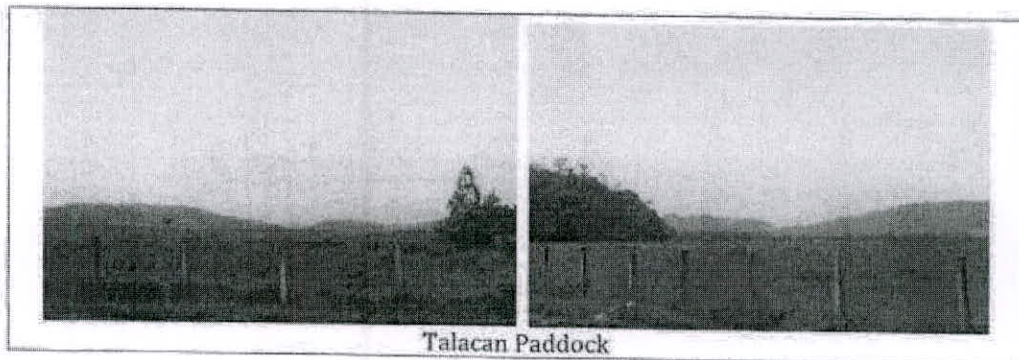
Sunvalley Paddock



Long Paddock



Waterfall Paddock



Talacan Paddock